

What is claimed is:

1. A cellular wireless communication network system comprising a plurality of base stations and a plurality of mobile stations, wherein said base stations are connected together with wireless communication.
- 5 2. A wireless communication network system as claimed in Claim 1, wherein said wireless communication with which said base stations are connected together, is achieved by an OFDM communication method.
3. A wireless communication network system as claimed in Claim 1, wherein said wireless communication with which said base stations are
10 connected together, is achieved by an AS-CDMA communication method.
4. A wireless communication network system as claimed in Claim 1, wherein communication between one of said base stations and said mobile stations is achieved by a packet CDMA communication method.
5. A wireless communication network system as claimed in Claim 2 or
15 3, wherein one frame of a packet of the communication method achieved by said packet CDMA communication method, is composed of a preamble block including barker code and an information block including M series codes which are orthogonal each other.
6. A wireless communication network system as claimed in any one of
20 Claim 1 to Claim 5, wherein the communication between said base station and said mobile stations, is achieved by a multicode transmission method for both of a downlink and an uplink.
7. A wireless communication network system as claimed in Claim 6, wherein said multicode transmission method comprises:
25 assigning data to a plurality of different orthogonal spread code;
combining together the data assigned to the respective orthogonal code at the same time to compose one information block; and

adding said information block after the preamble block to compose the one frame when the information is transmitted.

8. A wireless communication network system as claimed in Claim 7, wherein said multicode transmission method comprises:

- 5 detecting said information block by a detection of said preamble, reversely spreading said spread code after a synchronization of the respective spread code has established which are included in the information block; and

- 10 demodulating the data based on the respective spread code and synthesizing the respective data when the information is received to demodulate the whole information.

9. A wireless communication network system as claimed in any one of Claim 1 to Claim 5, wherein the communication between said base station and said mobile stations, is achieved by a M - array transmission method
15 for both of a downlink and an uplink.

10. A wireless communication network system as claimed in Claim 9, wherein said M-array transmission method comprises:

- dividing the data and assigning the orthogonal spread code to the every data respectively;
20 selecting the spread code in order of time base and combining together to compose one information block; and

adding said information block after the preamble block to compose the one frame of the data when the information is transmitted.

11. A wireless communication network system as claimed in Claim 10,
25 wherein said M-array transmission method comprises:

detecting said information block by a detection of said preamble;
establishing synchronization of the respective orthogonal spread

code which are included in said information block;

generating a number of reverse spread code, the number of which corresponds to the number of spread code used based on the synchronizing signal;

- 5 reversely spreading the respective spread code which are included in said information block; and

demodulating the data through integral networks by comparing the resulted integrated value made by the respective integral networks when the information is received.

- 10 12. A wireless communication network system as claimed in any one of Claim 1 to Claim 4, wherein the communication between said base station and said mobile stations, is achieved utilizing the approximate synchronized CDMA method at the uplink, and wherein said packet is composed of the one frame which includes a synchronizing block and an
15 information block which are arranged in this order, and said information block comprises the approximate synchronized CDMA code.

13. A wireless communication network system as claimed in Claim 12, wherein the communication between said base station and said mobile stations, is achieved by that an information about the phase is included on
20 the preamble portion, and said cell information about the cell is provided by the information about the phase at the downlink.

14. A wireless communication network system as claimed in Claim 13, wherein the communication between said base station and said mobile stations, is achieved by that an absolute phase is detected by the phase
25 information on said preamble portion as a reference phase, and said data are subjected to the phase correction and the frequency offset correction after reverse spreading, then said data are demodulated by the absolute

synchronizing detection at the downlink.

15. A wireless communication network system as claimed in any one of Claim 1 to Claim 14, wherein said base station takes the correlation of the uplink at the receiving portion and then detects the receiving timing, calculate a timing that said receiving timing becomes the most suitable, inserts the most suitable timing as the timing controlling information into the frame for downlink and send the data.

16. A wireless communication network system as claimed in Claim 15, wherein said mobile station establishes the synchronization of the spread code by detecting the spread code in the preamble portion at the receiving portion of the downlink, after making the reverse spreading of the spread code, demodulates the data through the integral networks, then extracts the transmission timing control information which is inserted in the received frame, controls the chip timing of the reverse spread code based on the transmission timing controlling information and transmit the data as the uplink.